



U.S. Department
of Transportation

Advanced Public Transportation Systems Deployment in the United States



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Advanced Public Transportation Systems Deployment in the United States

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Prepared by:

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Research and Special Programs Administration
U. S. Department of Transportation**

REPORT DOCUMENTATION PAGE

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13. ABSTRACT (Maximum 200 words) This report documents work performed under FTA's Advanced Public Transportation Systems (APTS) Program, a program structured to undertake research and development of innovative applications of advanced navigation, information, and communication technologies that most benefit public transportation. This report is a compilation of existing and planned deployments of APTS technologies and services. The information was collected during the Fall of 1995 and was obtained through contacts with one or more persons at each agency. The objective was to include information from all agencies who submitted information for the 1993 National Transit Database (NTD) Report Year, the last year for which NTD data was available at the time. A total of 464 agencies provided information for this study. Those with no existing or planned APTS systems are not included herein.			
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PREFACE

The information contained in this compilation of existing and planned deployments of Advanced Public Transportation Systems (APTS) technologies and services was collected by the staff of the Volpe National Transportation Systems Center during the Fall of 1995. The data was obtained through contacts with one or more persons at each agency. The objective was to reach all agencies who submitted information for the 1993 National Transit Database (NTD) Report Year, the latest year for which NTD data was available at the time. Some reporting agencies were not appropriate for inclusion in this compilation, and some could not be contacted. Nevertheless, a total of 464 agencies provided information for this study. Those with no existing or planned APTS systems are not included herein.

This research was conducted by the Volpe National Transportation Systems Center of the U.S. Department of Transportation, Research and Special Programs Administration and was sponsored by Office of Mobility Innovation of the U.S. Department of Transportation, Federal Transit Administration. Appreciation goes to Thomas Boatman and Gerald Ruiz of the Volpe Center, who collected much of the information contained herein. Appreciation also goes to a team from Unisys, headed by Michael Redington, who compiled the data and designed a program to sort, summarize, and present the data. Finally, appreciation goes to all the agencies who supplied information for this report.

LEGEND FOR TABLES

Service Type	
FR	Fixed Route
DR	Demand Response
HR	Heavy Rail
LR	Light Rail
CR	Commuter Rail
FB	Ferry Boat

Technology	
CC	Credit Card
DIG	Digital Radio
DK	Dead Reckoning
GPS	Global Positioning System
I	In-Vehicle
LC	Loran-C
MS	Magnetic Stripe Card
OTR	Other
P	Pre-Trip
SC	Smart Card
SO	Signpost/Odometer
T	In-Terminal
TR	Trunked Radio
W	Wayside

Status	
()	Implementation Phase (At least RFP issued)
[]	Planning Phase (Actively planning system, not just considering)
*	Test/Demonstration Only

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Advanced Communications	80	104	21,634
Service Type			
FR		72	
DR		22	
CR		2	
LR		3	
HR		2	
FB		3	
Technology			
Trunked		78	
Digital		45	
Other		7	
Unknown		6	
Trunked + Digital		32	
Other + Digital		1	
Status			
Operational		77	
Implementation		11	
Planning		16	
Automated Vehicle Location	86	105	28,745
Service Type			
FR		79	
DR		23	
CR		1	
HR		1	
FB		1	

* Not all of these vehicles will contain APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Automated Vehicle Location (Cont'd)			
Technology			
GPS		82	
Signpost/Odometer		15	
Dead-Reckoning		1	
Loran-C		2	
Other		3	
Unknown		2	
Status			
Operational		22	
Implementation		47	
Planning		30	
Testing		5	
Implementation/Testing		1	
Automated Passenger Counters	31	32	15,707
Service Type			
FR		31	
CR		1	
Status			
Operational		11	
Implementation		6	
Planning		13	
Testing		1	
Implementation/Testing		1	
Vehicle Component Monitoring	29	31	15,381
Service Type			
FR		29	
CR		1	
LR		1	

* Not all of these vehicles will contain APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Vehicle Component Monitoring (Cont'd)			
Status			
Operational		5	
Implementation		16	
Planning		9	
Testing		1	
Automated Operations Software	75	81	29,816
Service Type			
FR		66	
DR		4	
CR		5	
LR		2	
HR		4	
Status			
Operational		25	
Implementation		35	
Planning		20	
Testing		1	
Automated Traveler Information	93	99	31,296
Service Type			
FR		84	
DR		3	
CR		5	
LR		3	
HR		3	
FB		1	

* Not all of these vehicles will contain APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Automated Traveler Information (Cont'd)			
Status			
Operational		49	
Implementation		25	
Planning		21	
Testing		3	
Implementation/Testing		1	
Location			
Home/Work		47	
Activity Ctr/Stations - Transfer Pts		16	
Wayside		23	
In Vehicles		35	
Other		1	
Unknown		4	
Multimodal Traveler Information	10	11	5,794
Service Type			
FR		9	
DR		1	
CR		1	
Status			
Operational		5	
Implementation		3	
Planning		3	
Automated Fare Payment	65	72	20,951
Service Type			
FR		54	
DR		9	
CR		6	
LR		2	
HR		1	

* Not all of these vehicles will contain APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Automated Fare Payment (Cont'd)			
Technology			
Magnetic Stripe		32	
Smart Card		18	
Credit Card		11	
Other		11	
Status			
Operational		25	
Implementation		19	
Planning		23	
Testing		4	
Implementation/Testing		1	
Multi-Carrier Fare Integration	29	31	11,826
Service Type			
FR		27	
DR		2	
CR		1	
HR		1	
Technology			
Magnetic Strip		20	
Smart Card		3	
Credit Card		4	
Unknown		4	
Status			
Operational		13	
Implementation		12	
Planning		5	
Testing		1	

* Not all of these vehicles will contain APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Paratransit CAD	113	113	4,601
Service Type			
DR		113	
Status			
Operational		72	
Implementation		21	
Planning		19	
Testing		1	
Mobility Manager	11	11	783
Service Type			
FR		2	
DR		9	
Status			
Operational		6	
Implementation		1	
Planning		4	
Transportation Management Centers**	15	NA	NA
Service Type			
FR		14	
DR		3	
LR		1	
HR		1	
Status			
Operational		10	
Implementation		5	
Planning		4	

* Not all of these vehicles will contain APTS systems.

** These systems normally will not be operated by a transit agency.

TABLE 1. APTS DEPLOYMENT SUMMARY

SYSTEM	Transit Agencies Operating APTS Systems	Number of Separate Modes with APTS Systems	Total Vehicles Operated in These Modes*
Traffic Signal Priority	27	28	12,017
Service Type			
FR		24	
LR		4	
Status			
Operational		9	
Implementation		6	
Planning		7	
Testing		2	
Implementation/Testing		2	
Planning/Testing		2	
Real-Time Ridesharing**	1	NA	NA
Status			
Implementation		1	
Automated HOV Facility Monitoring**	3	NA	NA
Status			
Operational		1	
Testing		2	

* Not all of these vehicles will contain APTS systems.

** These systems normally will not be operated by a transit agency.

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Mobility Manager	Transportation Management Centres	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring	
Anchorage Public Transit, AK	48	FR	TR,DIG														
City of Huntsville, AL	15	DR	TR,DIG														
Mobile Transit Authority, AL	12	FR															
Montgomery Area Transit System, AL	13	DR															
Community Res. Group, Springdale, AR	32	FR	(TR,DIG)														
City of Mesa, AZ	4	DR															
City of Phoenix Pub. Transit Div., AZ	40	FR															
Glendale Dial-A-Ride, AZ	6	DR															
Maricopa County STS, Phoenix, AZ	45	DR															
Peoria Transit, AZ	23	FR															
Reg. Pub. Transp. Auth., Phoenix, AZ	30	DR															
Scottsdale Connection, AZ	385	FR	[GPS]														
Sun Tran, Tucson, AZ	99	DR	(GPS)														
	15	DR															
	70	DR															
	6	DR															
	45	FR															
	47	DR															
	12	FR															
	200	FR	(TR)	(GPS)	[X]	(X)	(X)	(X)	(X)	(X)	(W,I)	[MS]					

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Vehicle Component Monitoring	Automated Operations Software	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centres	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
AC Transit, Oakland, CA	702	FR	(GPS)	(X)	(X)	(W)	(I)								
Alameda Ferry Services, CA	2	FB	[GPS]												
Antelope Valley TA, Lancaster, CA	42	FR													
BART District, Oakland, CA	16	DR													
Central Contra Costa TA, Concord, CA	45	FR				X	T	MS	MS	MS					
City of Merced Transit System, CA	590	HR						MS	MS	MS					
City of Torrance Transit System, CA	116	FR													
Culver City Mun. Bus Lines, CA	23	DR													
Foothill Transit, West Covina, CA	215	FR													
Golden Gate BH&TD, San Francisco, CA	290	FR	DIG									[SC]			
Livermore/Amador Valley TA, CA	15	DR													
4	FB							P							
Lompoc Transit, CA	34	FR													
9	DR	(GPS)						(X)				(SC)			

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring	
Long Beach Public Transp. Co., CA	193	FR	20	DR	(X)	(X)	(X)	(X)	(X)	(X)	(X)							
Los Angeles Co. TC/MTA, CA	2472	FR	131	DR	(SO)	(X)	(X)	(X)	(X)	(X)	(X)				X	X		
			54	LR											X			
			26	HR											X			
Modesto Area Express, CA	33	FR	9	DR	[GPS]	[X]										[X]		
Montebello Bus Lines, CA	55	FR	5	DR	[GPS]										MS	MS	X	
Muni, San Francisco, CA	1000	FR	5	DR											X			
Municipal Bus Line, Gardena, CA	45	FR			LC										*SC			
N. San Diego Co. TDB, Oceanside, CA	10	DR																
	149	FR													X			
OmniTrans, San Bernardino, CA	115	FR	30	DR	[GPS]										[X]			
	87	DR													[X]			
Orange Co. TA, Orange, CA	470	FR [TR.DIGI]	240	DR											X			
	30	CR													X			

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centres	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
Gr. New Haven TD, Hamden, CT	36	DR														
Greater Bridgeport Transit Dist., CT	52	FR														
Housatonic Area Reg. TA, Danbury, CT	24	DR														
Northeast Transp. Co., Waterbury, CT	20	FR														
Northeast Transp. Co., Waterbury, CT	29	DR														
South East Area Transit, Norwich, CT	40	FR	OTR				X									
South East Area Transit, Norwich, CT	25	FR	TR													
Westport Transit District, Norwalk, CT	10	FR	TR													
Washington Metro. Area TA, DC	1	DR	TR													
Washington Metro. Area TA, DC	1506	FR	TR				P									
Delaware Admin. for RT, Wilmington, DE	746	HR														
Delaware Admin. for Spec. T, Dover, DE	124	FR														[SC]
Arc Transit, Palatka, FL	120	FR														
Arc Transit, Palatka, FL	100	DR														
Broward Co. Comm., Ft. Lauderdale, FL	18	FR	*GPS													
Bay Co. Cncl. on Aging, Panama City, FL	13	DR														
Broward Co. Comm., Ft. Lauderdale, FL	38	DR														X
Compreh. Paratransit Serv., Miami, FL	200	FR	(GPS)	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	X
Compreh. Paratransit Serv., Miami, FL	197	DR														
Compreh. Paratransit Serv., Miami, FL	150	DR	TR,DIG													

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Vehicle Component Monitoring	Automated Operations Software	Automated Traveler Information	Multi-modal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Mobility Manager	Transportation Management Centres	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
East Volusia TA, S. Daytona, FL	51	FR											
	37	DR											
Hillsborough Area Reg.TA, Tampa, FL	179	FR	SO	X	P								*
	46	DR											
Jacksonville Transportation Auth., FL	183	FR	SO	X									
LYNX, Orlando, FL	204	FR	[GPS]	[X]									
	90	DR											
Lee County Transit, Ft. Myers, FL	39	FR	TR										
	18	DR											
Manatee County Transit, Bradenton, FL	18	FR	TR										
	19	DR											
Metro-Dade Transit Auth., Miami, FL	619	FR	(TR,DIG)	(GPS)									
	46	DR											
Okaloosa Co. CT, Ft. Walton Beach, FL	136	IHR	(TR,DIG)	(GPS)									
	29	AG	X										
Pasco Co. PTD, New Port Richey, FL	40	DR											
Red Top Transp. Inc., Miami, FL	22	FR											
Sarasota County TA, FL	102	DR	TR	(GPS)									
	34	FR	(TR,DIG)										

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications			Automated Vehicle Location			Automated Passenger Counters			Vehicle Component Monitoring			Automated Operations Software			Multimodal Traveler Information			Automated Fare Payment			Multi-Carrier Fare Integration			Mobility Manager			Transportation Management Centres			Traffic Signal Priority			Real Time Ridesharing			Automated HOV Facility Monitoring		
			(FR)	(DR)	(DIG)	(GPS)	(X)	(X)	(P,T)	(MS)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)						
Space Coast Area Transit, Cocoa, FL	27	FR	TR	(GPS)																																					
Taltran-City of Tallahassee, FL	17	DR	TR	(GPS)																																					
Tri-Co. Com. RA, Ft Lauderdale, FL	54	FR																																							
MARTA, Atlanta, GA	13	DR																																							
City and County of Honolulu, HI	31	CR	DIG																																						
Mayflower Contract Svc., Honolulu, HI	750	FR	(GPS)	(X)																																					
Bettendorf Transit System, IA	45	DR																																							
City Bus Dept., Cedar Rapids, IA	240	HR																																							
Des Moines Metropolitan TA, IA	500	FR	DIG																																						
Metrop. TA-Black Hawk Co., Waterloo, IA	100	DR	DIG																																						
	92	DR																																							
	7	FR																																							
	4	DR																																							
	38	FR	(GPS)																																						
	8	DR																																							
	85	FR	GPS																																						
	25	DR	GPS																																						
	18	FR																																							
	14	DR																																							

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
Sioux City Transit System, IA	25	FR	[GPS]													
Boise Urban Stages, ID	7	DR	[GPS]													
Chicago Transit Authority, IL	38	FR	TR													
	5	DR	TR													
METRA, Chicago, IL	2035	FR	(TR)	(GPS)	(X)	(X)	(X)	(W)	(MS)	(MS)						(X)
Madison Co. Trans. Dist., Granite City, IL	1236	HR														
	870	CR														
PACE, Chicago, IL	27	FR	(TR,DIGI)	* GPS												
Rock Island Co. MTD, IL	29	DR	(TR,DIGI)													
Gary Public Transp. Corp., IN	600	FR	TR	(GPS)	X	(X)	(X)	P	X	X						(X)
Gr. Lafayette Pub. Transp. Corp., IN	58	FR		(GPS)												
Heart City Rider Prog., South Bend, IN	32	FR		(GPS)												
Muncie Indiana Transit System, IN	42	FR														
N. Indiana Commuter, Chesterton, IN	8	DR														
Tradewinds Rehab. Center, Gary, IN	35	DR														
	28	FR	TR,DIGI													
	11	DR														
	58	CR														
	32	DR	(GPS)													(X)

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications		Automated Vehicle Location		Automated Operations Software		Automated Transit Information		Multimodal Traveler Information		Automated Fare Payment		Multi-Carrier Fare Integration		Paratransit CAD		Mobility Manager		Transportation Management Centres		Traffic Signal Priority		Real Time Ridesharing		Automated HOV Facility Monitoring				
			FR	DR	FR	DR	SO	[X]	X	X	[X]	X	X	[X]	X	X	[X]	X	X	X	X	X	X	X	X	X	X	X	X	X	
Wichita Metropolitan TA, KS	53	FR																													
Henderson Area Rapid Transit, KY	6	FR																													
TA of River City, Louisville, KY	2	DR																													
City of Lafayette Transit, LA	257	FR																													
Louisiana Transit Co., Harahan, LA	15	DR																													
Reg. Transit Auth., New Orleans, LA	16	FR																													
Shreveport Area Transit System, LA	6	DR																													
Cape Ann Transp. Auth., Gloucester, MA	29	FR																													
Reg. Transit Auth., New Orleans, LA	500	FR	[GPS]																												
Shreveport Area Transit System, LA	46	FR	TR,DIG	[GPS]																											
Gtr. Attleboro-Taunton RTA, MA	12	DR																													
Cape Ann Transp. Auth., Gloucester, MA	10	FR	(TR,DIG)	[GPS]																											
Gtr. Attleboro-Taunton RTA, MA	10	DR	TR,DIG	[GPS]																											
Lowell Regional Transit Authority, MA	20	FR	TR,DIG																												
Lowell Regional Transit Authority, MA	45	DR	TR,DIG	[GPS]																											
Lowell Regional Transit Authority, MA	35	FR																													
Lowell Regional Transit Authority, MA	33	DR																													

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counter	Vehicle Component Monitoring	Automated Operations Software	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring	
Bay Metro. Transp. Auth., Bay City, MI	45	FR															
Capitol Area Transp. Auth., Lansing, MI	5	DR															
	59	FR	[GPS]														
City of Jackson TA, MI	60	DR															
	14	FR															
Grand Rapids Area TA, MI	28	DR															
	70	FR															
Muskegon Area Transit System, MI	16	FR	[TR.DIG]														
SMART, Detroit, MI	250	FR	(GPS)			(X)	(X)	(P)	(X)								
	150	DR	(GPS)														
Metro. Transp. Comm., Minneapolis, MN	810	FR	*GPS	X		X	P,W	X									
Bi-State Develop. Agency, St. Louis, MO	624	FR	DIG	X													
Columbia Area Transit System, MO	68	DR	DIG														
Kansas City Area TA, MO	11	FR															
	6	DR															
Transit Management of St. Joseph, MO	232	FR	[SO]														
	17	FR															
	3	DR															
City of Jackson Transit System, MS	45	FR															
	12	DR															

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Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counter	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
Lane Transit District, Eugene, OR	95	FR [DIG] SO	X													
Rogue Valley Transit Dist., Medford, OR	17	FR DR														
Salem Area Mass Transit District, OR	7	FR TR DIG														
Tri-Met, Portland, OR	50	FR (GPS) X														
630	FR (GPS) X															
140	DR (GPS)															
Beaver County TA, Rochester, PA	13	FR [GPS]														
23	DR [GPS]															
COLTS, Scranton, PA	34	FR GPS														
Centre Area TA, State College, PA	39	FR														
7	DR															
Mid Mon Valley TA, Charleroi, PA	19	FR														
Port Auth. of Allegh. Co., Pittsburgh, PA	887	FR														
61	LR															
S.E. Pennsylvania TA, Philadelphia, PA	1493	FR OTR														
256	DR															
147	LR OTR															
376	HR OTR															
329	CR OTR															

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Traveler Information	Multi-modal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centres	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
Westmoreland Co.TA, Greensburg, PA	25	FR															
	30	DR															
Williamsport Bureau of Transp. Auth., PA	20	FR TR,DIG															
	2	DR															
York County Transportation, PA	25	FR															
	25	DR															
Metropolitan Bus Authority, San Juan, P	224	FR	OTR														
	14	DR															
Rhode Island Public TA, Providence, RI	241	FR															
	60	DR															
Greenville Transit Auth., Greenville, SC	24	FR															
	21	DR															
Santee Watenee RTA, Sumter, SC	10	FR															
	60	DR															
Rapid Transit System, Rapid City, SD	8	FR TR,DIG															
	10	DR															
Chattanooga Area RTA, TN	66	FR													[SC]		
	10	DR															
Clarksville Transit System, TN	8	FR TR															X
	5	DR															

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Vehicle Component Monitoring	Automated Dispatch Software	Automated Traveler Information	Multimodal Traveler Information	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring	
Sun Metro, El Paso, TX	160	FR	[GPS]	[X]												
	62	DR														
Transp. Svc. Dept., Grand Prairie, TX	7	DR														
VIA, San Antonio, TX	529	FR	SO													
	156	DR														
Waco Transit System, TX	16	FR (TR.DIG)														
	4	DR														
Charlottesville Transit Service, VA	16	FR														
	5	DR														
Fairfax Connector Bus Sys., Lorton, VA	135	FR	TR													
		DR														
Peninsula TDC, Hampton, VA	125	FR														
	28	DR														
Potomac/Rappah. TC, Woodbridge, VA	20	FR	TR (GPS)													
	161	FR	SO													
Tidewater Regional Transit, Norfolk, VA	75	DR														
	29	FR														
Chittenden County TA, Burlington, VT	9	DR														
	96	FR														
Clark Co. Pub. Transp., Vancouver, WA	20	DR	TR													

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications			Automated Passenger Counters			Vehicle Component Monitoring			Automated Operations Software			Automated Transit Information			Multimodal Traveler Information			Automated Fare Payment			Multi-Carrier Fare Integration			Paratransit CAD			Mobility Manager			Transportation Management Centers			Traffic Signal Priority			Real Time RideSharing			Automated HOV Facility Monitoring					
			FR	X	SO	X	X	P	X	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)											
King County Metro, Seattle, WA	1238	FR	X	SO	X	X	X	P	X	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)													
	408	DR																																													
	5	LR																																													
Kitsap Transit, Bremerton, WA	122	FR																																													
Pierce Co. Ferry Op., Tacoma, WA	2	FB																																													
Pierce Transit, Tacoma, WA	182	FR																																													
	75	DR																																													
Sen. Svc. Snohomish Co., Mukilteo, WA	34	DR																																													
Snohomish Co. Tran. BA, Lynnwood, WA	230	FR																																													
	40	DR																																													
Spokane Transit Authority, WA	143	FR																																													
Washington State DOT, Seattle, WA	25	FB																																													
Whatcom Transp. Auth., Bellingham, WA	33	FR																																													
	31	DR																																													
City of Waukesha, WI	20	FR																																													
	3	DR																																													
Green Bay Transit, WI	44	FR																																													
Kenosha Transit, WI	39	FR																																													

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency or Location	Number of Vehicles	Service Type	Advanced Communications	Automated Vehicle Location	Vehicle Component Monitoring	Automated Operations Software	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority	Real Time Ridesharing	Automated HOV Facility Monitoring
Lacrosse Municipal Transit Utility, WI	28	FR (TR.DIG)													
Madison Metro. Transit, WI	8	DR													
Milwaukee Co. Transit, Milwaukee, WI	550	FR	(TR)												(P)
Sheyboygan Transit System, WI	33	FR													(X)
Kanawha Valley RTA, Charleston, WV	58	FR													
Tri-State TA, Huntington, WV	8	DR													
City of Casper, WY	30	FR													
The City of Cheyenne Transit Prog., WY	9	DR	TR.DIG												[SC]
	23	DR	TR.DIG												X



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